

infrastructure investment, has grown by roughly 25% annually for the past several years in Louisiana.<sup>58/</sup>

## **2. Decreasing Louisiana Cellular Prices Reflect The Competitive Market**

Even as cellular carriers continue to invest in system improvements and capacity enhancement, they have brought cellular service prices down. McCaw's cellular systems in Louisiana have introduced "package plans" -- which offer monthly access and a pre-set package of airtime for a discounted monthly fee -- providing subscribers with immediate discounts over traditional basic rates, depending on individual usage patterns. As a result, McCaw's Louisiana customers have seen prices drop 20 percent in the last two years alone.

The decline in cellular service pricing in Louisiana did not, however, occur because of the LPSC's regulatory scheme. Louisiana carriers' rate decreases mirror those implemented by cellular operators across the nation, and reflect competition between carriers, expected entry by new competitors, and the desire to improve pricing in order to open new market segments. Thus, the LPSC's regulatory regime has done nothing to stimulate price reductions. To the contrary, its tariffing rules have only added expense to the process of implementing new rate plans and, as the Commission noted in its CMRS Second Report and Order, undermined the carrier's competitive incentives to experiment with new pricing strategies.

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<sup>58/</sup> See also LPSC Petition, Exhibit 51.

**D. The LPSC's Flawed Economic Analysis Fails To Justify The Imposition Of Rate Regulation On Cellular Providers**

The Commission has found that the CMRS marketplace is sufficiently competitive to justify forbearance from rate and tariff regulation.<sup>59/</sup> Nothing in the petition undermines this conclusion with respect to Louisiana. The LPSC has failed to demonstrate the exercise of market power by cellular carriers, including supracompetitive pricing, and its claims about anticompetitive behavior are based on faulty economic analysis. Nor has the LPSC shown any benefits from its past regulation of cellular carriers, and its petition ignores the substantial costs that rate regulation imposes upon service providers and the public. By contrast, there is evidence of sufficient competitive behavior and consumer benefits in the CMRS marketplace to justify the preemption of economic regulation by the LPSC. The increasing competition in the CMRS marketplace further supports preemption of state rate regulation.<sup>60/</sup>

In order to determine whether there is a need for regulatory intervention, market share and concentration must be computed for properly defined antitrust markets. The LPSC foreordains its conclusion in support of cellular regulation by determining that there is no substitute service for mobile cellular telephones.<sup>61/</sup> In so doing, however, the LPSC ignores the fact that the mobile telecommunications marketplace is becoming increasingly competitive. Enhanced Specialized Mobile Radio ("ESMR") providers are also consolidating their facilities

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<sup>59/</sup> See Second Report and Order, 9 FCC Rcd. at 1470, 1472, 1478-79.

<sup>60/</sup> See Declaration of Bruce M. Owen, President, Economists Incorporated ("Owen Declaration"), attached hereto as Exhibit A. At McCaw's request, Economists Incorporated undertook an economic analysis of the need for and potential effects of state rate regulation of CMRS providers.

<sup>61/</sup> LPSC Petition at 29.

into a nationwide network.<sup>62/</sup> Digital PCS systems and ESMRs, moreover, are likely to have more effective capacity than cellular systems, which will have to support a substantial analog customer base for the foreseeable future.<sup>63/</sup> Even in advance of the entry of new market participants, the real price of cellular service, after adjusting for inflation, has declined.<sup>64/</sup>

Regulation can be justified only if there is evidence of market power or a likelihood that such power will be exercised in the future. There is no evidence that the CMRS marketplace in Louisiana suffers from either defect.

**1. Existing Rates And Rate Structures Are Not Evidence Of Anti-Competitive Behavior**

The LPSC suggests that both "uniformity" in rates charged by the two cellular carriers in an area and "differences" in the rate structures of two cellular carriers are evidence of anti-competitive behavior.<sup>65/</sup> The LPSC bases its economic argument on observation of prices in various areas of the state. In some areas, while the two competing cellular licensees offer a number of different rate plans, the rates are similar for similar plans. The LPSC presents this similarity as evidence of lack of competition, or "consciously parallel pricing." However, prices of similar services will tend to be similar in a competitive market.<sup>66/</sup> If prices are different,

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<sup>62/</sup> Owen Declaration at ¶¶ 21-33; accord Second Report and Order, 9 FCC Rcd. at 1470.

<sup>63/</sup> See Owen Declaration at ¶¶ 21-29.

<sup>64/</sup> Id. at ¶ 36.

<sup>65/</sup> LPSC Petition at 28-29, 33.

<sup>66/</sup> Owen Declaration at ¶ 39.

consumers will tend not to buy from the supplier with the higher price, so that the supplier will be forced to reduce its price until it is charging no more than its rival.<sup>67/</sup>

In other areas of Louisiana, apparently, the rates of the competing carriers are different, such that one or the other carrier offers cheaper service for a given volume of calling.<sup>68/</sup> However, differences in rate structures between carriers are consistent with vigorous price competition. As carriers compete, they may experiment with different pricing plans to see which plan is most attractive to consumers.<sup>69/</sup> The LPSC also fails to recognize the competition between cellular carriers that exists on the basis of service quality, features, geographic coverage, and other non-price characteristics of service which affect its value in the eyes of consumers.

## **2. Cellular Providers Lack The Ability To Collude To Set Prices**

The Commission has recognized that CMRS providers do not have control over bottleneck facilities.<sup>70/</sup> More generally, given the presence of two cellular carriers, no firm has significant unilateral market power. Because one cellular provider could undercut efforts by the other to exercise market power unilaterally, the exercise of market power to set prices would require coordinated behavior or collusion by at least two cellular providers and, in the near future, by providers of personal communications services ("PCS") and ESMR.

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<sup>67/</sup> Id.

<sup>68/</sup> Id. at ¶ 40.

<sup>69/</sup> Id.

<sup>70/</sup> Second Report and Order, 9 FCC Rcd. at 1499.

There are a number of characteristics of the market for CMRS that would make it difficult to collude to raise prices. These characteristics include rapid technological change, which is accompanied by the introduction of new services and the expansion of capacity, and the rapid expansion of demand. Collusive arrangements are difficult to reach and maintain where, as in the case of CMRS, there is a wide range of services, variations in services among providers, and numerous pricing plans. It is unlikely that new market entrants, with their natural incentive to cut prices to gain market share, would willingly charge high prices that would deter subscribers.<sup>71/</sup>

**3. There Is No Merit In The LPSC's Inference That Anticompetitive Behavior Is Occurring Because The LPSC Receives A Large Volume Of Customer Complaints**

The LPSC indicates that each year it receives a "large volume" of complaints.<sup>72/</sup> There are many possible explanations for complaints, however, and an inference cannot be made that rate regulation is warranted simply because complaints about service occur.

The LPSC's resolution of these complaints, moreover, does not support the need for continued state rate regulation. On the contrary, in each example offered by the LPSC, its involvement was initiated by the receipt of a complaint. The LPSC did not initiate action based on independent monitoring of carrier tariffs or practices. Furthermore, LPSC's loss of rate regulatory authority does not deprive it of all jurisdiction over instate cellular operations: the preemption of rate authority does not effect LPSC's oversight of other terms and conditions affecting CMRS service, such as consumer protection issues. In any case, as demonstrated

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<sup>71/</sup> Owen Declaration at ¶¶ 39-42.

<sup>72/</sup> LPSC Petition at 9-15.

below, the continued applicability of the nondiscrimination requirements of Section 202 and the availability of complaint procedures under Section 208 of the Communications Act are adequate to protect the consumers in all of the complaint situations identified by the LPSC.

**4. Louisiana Cannot Justify Regulation Of CMRS Providers Based On Its Need To Ensure Universal Service**

The LPSC contends that "[i]f the goal of universal service is to be achieved in Louisiana, the LPSC must be allowed to regulate CMRS providers in the state."<sup>73/</sup> However, Section 332(c)(3)(A) limits state jurisdiction over the imposition of universal service obligations on CMRS providers to instances "where such services are a substitute for land line telephone exchange service for a substantial portion of the communications" within the State. The LPSC has not presented the existence of such circumstances. The legislative history of this provision further demonstrates that the conclusion to limit state regulation in this manner was carefully debated, and alternative language that would have enlarged the scope of state authority was considered and rejected.<sup>74/</sup> Congress currently is considering legislation that would redefine Federal and state universal service obligations.<sup>75/</sup> Until and unless such provisions are enacted,

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<sup>73/</sup> LPSC Petition at 47.

<sup>74/</sup> "The Conference Agreement adopts the language 'substantial portion of the telephone land line exchange service' rather than either 'communications' or 'public' to more accurately describe the situation in which state authority to regulate commercial mobile services should be granted. For instance, the Conferees intend that the Commission should permit states to regulate radio service provided for basic telephone service if subscribers have no alternative means of obtaining basic telephone service." Conference Report at 493.

<sup>75/</sup> See S. 1822, 103d Cong., 2d Sess. (1994); H.R. 3626, 103d Cong., 2d Sess. (1994). Both bills would require contributions for the preservation of universal service from all common carriers, including cellular operators and other CMRS providers, regardless of whether they were substitutes for landline telephone exchange service for a substantial portion of the communications within a state. S. 1822, § 102(a) (adding new sec. 201A(c) to the  
(continued...)

however, states have no basis for asserting jurisdiction over the universal service obligations of all CMRS providers. The LPSC can not base its claim to regulate CMRS rates on an allegation that the preservation of universal service requires it.

**E. The LPSC Presents No Evidence That Regulation Would Benefit Consumers And Ignores The Substantial Costs Of Rate Regulation**

**1. Federal Remedies Are Adequate To Address The Competitive Concerns Raised By The LPSC**

As demonstrated above,<sup>76/</sup> the Commission has held that the Federal regulatory framework is sufficient to remedy competitive abuses or unjust and discriminatory rates.<sup>77/</sup> Market conditions in Louisiana are similar to those considered by the FCC and found not to warrant CMRS regulation. Thus, the LPSC has failed to demonstrate that existing federal remedies are inadequate to protect consumers.

In support of its claim that rate regulation in Louisiana is necessary, the LPSC relies heavily upon the Commission's statement that the cellular market is not fully competitive.<sup>78/</sup> This reliance is misplaced. While the FCC stated that the record did not support a finding that the cellular market is fully competitive, it properly recognized that conditions in the CMRS market are sufficiently competitive to warrant forbearance from requiring, or even permitting,

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<sup>75/</sup> (...continued)

Communications Act of 1934); H.R. 3626, § 302(a) (adding new sec. 201(c)(6)(B)(iv) to the Communications Act of 1934).

<sup>76/</sup> See supra, pp. 12-13.

<sup>77/</sup> Second Report and Order, 9 FCC Rcd. at 1478-79.

<sup>78/</sup> LPSC Petition at 18, 22, 23, 27-28, 35-36.

CMRS providers to file tariffs.<sup>79/</sup> Indeed, the Commission concluded that compliance with Sections 201, 202 and 208 of the Act was sufficient to protect consumers.<sup>80/</sup> The LPSC has not presented any evidence that Louisiana consumers would not be protected by these federal remedies, which are available to address any abuses identified by the states.

The continued applicability of Sections 201, 202, and 208 will remain as consumer protective measures in the event of market failure. The just and reasonable rate requirements of Section 201 and the prohibition on unjustly and unreasonably discriminatory rates of Section 202 "will provide an important protection in the event there is a market failure."<sup>81/</sup> Further, denial of the LPSC's petition would not leave Louisiana consumers without recourse<sup>82/</sup> because "the Section 208 complaint process would permit challenges to a carrier's rates or practices and full compensation for any harm due to violations of the Act."<sup>83/</sup> The complaint process would provide sufficient recourse and resolution of carrier-carrier or customer-carrier disputes. In light of these adequate federal remedies, state regulation clearly is not necessary in order to protect consumers.

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<sup>79/</sup> Second Report and Order at 1478-79.

<sup>80/</sup> Id.

<sup>81/</sup> Id.

<sup>82/</sup> LPSC Petition at n.4, 30-32. The LPSC has suggested that the Commission is not equipped to regulate intrastate CMRS. The LPSC provides as an example a complaint forwarded by the FCC to the LPSC for resolution after the adoption of § 332. However, as of June 1994, states with existing rate regulation had authority to exert their jurisdiction at least until they filed a petition to extend that jurisdiction on August 10, 1994.

<sup>83/</sup> Second Report and Order at 1479.



The LPSC has not presented any evidence of anticompetitive or discriminatory practices, systematic unreasonable rates or discriminatory rates imposed upon subscribers, or any other evidence of market conditions that warrants additional regulation at the state level. The Commission must deny the LPSC's Petition.

**2. The LPSC Has Failed To Show That Any Residual Risks To Consumers Outweigh The Substantial Costs Associated With Regulation**

The LPSC claims that state rate regulation is necessary because CMRS rates may be excessive, the market is a duopoly, and the FCC cannot actively monitor all CMRS providers to ensure they do not exploit their duopoly status and to prevent rates from becoming unjust and unreasonable. The LPSC has completely failed, however, to present evidence that its rate regulation is the appropriate response and that such regulation produces net benefits.<sup>84/</sup> While there may be benefits to regulation, the inquiry does not end there. The LPSC must demonstrate that any benefits of state rate regulation outweigh the administrative costs attendant to such regulatory requirements. This the LPSC fails to do.

Tariffing requirements, for instance, promote the very anticompetitive practices that the LPSC is trying to prevent. Tariff filings impede carriers from making quick, efficient responses to changes in demand and cost. Though intended to protect consumers and promote competition, the LPSC's rate regulations will only harm consumers and discourage competition over time. The retention of the LPSC's tariffing requirements would "impede and remove incentives for

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<sup>84/</sup> LPSC Petition at 34. To the extent that LPSC is seeking authority for regulation not yet determined, such a request must be denied. As discussed supra at 11, states must provide detailed descriptions of the regulations they seek to extend or establish. Pending proceedings to determine whether and/or the extent to which to regulate is not a sufficient ground for the Commission to grant regulatory authority over CMRS. LPSC Petition at 2-3.

competitive price discounting" and "impose costs on carriers that attempt to make new offerings."<sup>85/</sup> Forbearance from these tariffing requirements, by contrast, will promote competitive market conditions and enhance competition among CMRS providers.<sup>86/</sup>

The Commission itself has found that tariff filings were unnecessary and that they would enable CMRS providers to maintain rates at an artificially high level.<sup>87/</sup> Given that publicly filed tariffs facilitate monitoring, tariffs actually simplify tacit collusion.<sup>88/</sup> The LPSC does not even attempt to address these findings in its petition. While it asserts that its tariffing requirements enable it to determine whether carriers are providing the services set forth in the tariffs in the manner and at the rate specified in the tariff,<sup>89/</sup> it offers no examples to support the claimed success of this tariff review process.

To justify state rate regulation, market conditions must be shown to have failed to adequately protect subscribers from unjust and unreasonable rates or unjustly and unreasonably discriminatory rates. The LPSC surmises that elimination of state regulation "may" have a detrimental effect on the reasonableness of rates and will give carriers incentive to engage in discriminatory and anticompetitive practices. However, speculation about the effects of the removal of state regulation is insufficient justification for regulation that is, at the outset,

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<sup>85/</sup> Second Report and Order at 1479.

<sup>86/</sup> Id.

<sup>87/</sup> Id. at 1479-80.

<sup>88/</sup> Id. at 1479.

<sup>89/</sup> LPSC Petition at 20.

presumed burdensome and unnecessary. "Preventive government" is not sufficient justification to require the burdensome tariff filing requirements that the LPSC imposes.

### **Conclusion**

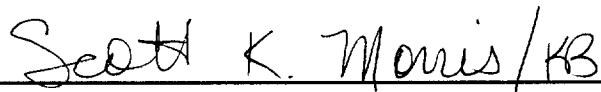
The Commission should deny the LPSC's request for rate regulation authority. The LPSC has failed to satisfy the statutory prerequisites to grant such authority, and its analysis of the cellular marketplace is fundamentally flawed. The LPSC has not established that its proposed regulatory program will yield any benefits for the people of Louisiana.

Respectfully submitted,

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September 19, 1994

D31437.2

**EXHIBIT A**

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C.

In the Matter of Implementation  
of Sections 3(n) and 332 of the  
Communications Act: Regulatory  
Treatment of Mobile Services

}

GN Docket No. 93-252

**Declaration of Bruce M. Owen on the Louisiana Petition**

**I. Qualifications**

1. I am an economist and president of Economists Incorporated, an economic consulting firm located at 1233 20th Street, N.W., Washington, D.C. 20036. I am also a visiting professor of economics at Stanford University's Washington, D.C. campus. I hold a Ph.D. in economics from Stanford University (1970) and a B.A. in economics from Williams College (1965). My fields of specialization are applied microeconomics and industrial organization, especially antitrust economics and regulation of industry. I have published a number of books and articles in these fields, including "*United States v. AT&T: The Economic Issues*" (with R. Noll, in J. Kwoka and L. White, eds., *The Antitrust Revolution*, Scott, Foresman, 2nd ed., 1994), *Video Economics* (with S. Wildman, Harvard University Press, 1992), and *The Regulation Game* (with R. Braeutigam, Ballinger, 1978). I have taught economics as a full-time member of the faculties of Duke University and Stanford University. From 1979 to 1981 I was the chief economist of the Antitrust Division of the United States Department of Justice. During 1971-1972 I was the chief economist of the White House Office of Telecommunications Policy. I have testified in a number of an-

titrust and regulatory proceedings, including ones relating to local exchange, interexchange, and cellular telephony as well as paging. A copy of my curriculum vitae is attached to this declaration.

## **II. Introduction and Summary**

2. I have been asked by counsel for McCaw Cellular Communications, Inc., to provide an economic analysis of the "Petition on Behalf of the Louisiana Public Service Commission for Authority to Retain Existing Jurisdiction Over Commercial Mobile Radio Services Offered Within the State of Louisiana" (PR File No. 94-SP5, Aug. 9, 1994 (LPSC Petition)). This section summarizes my conclusions. Section III examines the arguments made by the Louisiana Public Service Commission (LPSC) in support of regulation of commercial mobile radio service (CMRS) providers. Sections IV and V evaluate the effectiveness and costs of regulation, and Section VI addresses implications of granting the LPSC petition. VII is a conclusion.

3. The Federal Communications Commission (Commission) should not grant the LPSC's petition. The Commission has recently concluded that relevant markets are sufficiently competitive to justify forbearance from regulation of cellular and other CMRS providers (*CMRS Second Report*, 9 FCC Rcd 1411 (1994) at ¶¶135, 145). Nothing in the LPSC petition undermines this conclusion. This is true regardless of which CMRS prices one is considering, for example, wholesale and/or retail prices for access, air time, roaming, or enhanced services.

4. The key question with respect to rate regulation is whether it is likely to be cost-effective in the future world to which it will be applied. It is generally acknowledged that the CMRS market is becoming more competitive as a result of changes in technology and various Commission initiatives that will permit or promote entry. Because regulation cannot be justified based on evidence regarding past and present conditions, clearly there is no basis for continuing or future regulation.

5. *First*, the Commission has already found that “CMRS providers do not have control over bottleneck facilities” (*CMRS Second Report* at ¶237). In the case of cellular carriers this conclusion is clearly correct. For example, new CMRS systems do not need to interconnect with cellular networks (as opposed to the facilities of local exchange carriers (LECs)) in order to enter the mobile communications market successfully.

6. *Second*, no one, including the LPSC, has demonstrated that the presence today of only two cellular providers in each area has resulted in anticompetitive behavior, including supra-competitive pricing.<sup>1</sup> Without such a demonstration, no case can be made for regulation of CMRS prices. The LPSC has offered analyses and data that allegedly demonstrate that cellular carriers have been exercising market power. None of them, individually or collectively, demonstrates the exercise of market power. Claims about anticompetitive behavior are based on faulty economic analysis. By contrast, there is evidence of sufficient competitive behavior and benefits to consumers to justify continued forbearance from economic regulation.

7. *Third*, additional CMRS providers will soon offer competitive cellular-like services. As new CMRS providers establish themselves, any possibility that cellular carriers could acquire or exercise market power is eliminated. Entry by new competitors will be facilitated by the rapid growth in demand for and sales of mobile services.

8. *Fourth*, if state regulation of prices of cellular services were in the public interest, the LPSC should be able to demonstrate benefits from past state regulation. If there were benefits, one ought to be able to observe them by comparing states that regulated with states that did not. However, there is no evidence in the LPSC petition or elsewhere that

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<sup>1</sup> See my declarations analyzing the petitions of other states in this proceeding, and my declaration submitted in CC Docket 94-54 (In the Matter of Equal Access and Interconnection Obligations Pertaining to CMRS, September 12, 1994).

regulation of cellular service prices in Louisiana or other states has had any beneficial effect in the past.

9. *Fifth*, regulation of CMRS prices imposes substantial costs. Price controls limit the ability of regulated firms to respond to changes in technology and in cost and demand conditions, and deter new investments, quality improvements, introduction of new services, and entry by reducing returns on pro-competitive activities. The distortionary effects of price regulations that limit returns on investments are likely to be greatest in industries such as CMRS that are characterized by rapid growth, technological change, and relatively high risk.

10. Based on my review of the evidence, it is my opinion that there is no empirical basis for believing that there is a problem with market performance that would warrant regulating CMRS pricing. Thus, the Commission's conclusion that the market is sufficiently competitive to justify forbearance from regulation of cellular and other CMRS carriers is correct. LPSC regulation of CMRS pricing would therefore be likely to harm consumers. There is nothing special about the nature of CMRS competition or regulation in Louisiana that would change this conclusion.

### **III. Market Structure and Performance**

#### **A. *Importance of Market Structure and Performance***

11. In order to assess any potential regulation, it is useful to begin by considering the implications of leaving decisions to market forces. This is commonly done in an antitrust context by defining a relevant market and then evaluating market concentration, conditions of entry, and other structural and behavioral evidence relating to the likelihood that suppliers are exercising, or may come to exercise, unilateral or collusive market power. If market power is being exercised or is likely to be exercised in the future, then regulatory interventions may have benefits in preventing or stemming exclusionary or other anticompetitive behavior. Even if such benefits may result, however, they must be weighed against the fact that the regulatory intervention will impose its own costs, distortions, and dis-



incentives. It would be wrong to assume that an imperfect market can be replaced with perfect regulation.

12. The remainder of Section III is devoted to an analysis of the LPSC discussion of the structure and performance of the CMRS markets in which cellular services compete.

**B. Market Definition**

1. Purpose of Market Definition

13. To analyze competition, it is important to begin with properly defined antitrust markets. A group of products or services and an associated geographic area constitutes an antitrust market if it is the smallest set of products and the smallest area capable in principle of being profitably monopolized. In other words, if one assumed that a hypothetical single firm controlled the supply of all the products in question, and if that firm could increase its profits by raising prices significantly above competitive levels, then an antitrust market has been defined. However, if a price increase by a hypothetical single firm would be unprofitable because consumers would switch in significant numbers to other products, then the market has been defined too narrowly for antitrust analysis.

2. Relevant Product Markets

14. Cellular services may be competitive with certain landline services, such as intra-LATA toll service, pay telephone service, and telemetry service (*Financial Services Report*, May 25, 1994; *Electric Utility Week*, Aug. 29, 1994, at 7). Cellular services would be competitive with additional landline services but for the fact that residential local exchange services are priced below costs. For customers with relatively long local loops, landline service costs are likely to be similar to or greater than cellular service costs. To analyze some policy issues, it is therefore appropriate to define relevant antitrust markets that include both cellular and landline services. Nevertheless, for the purposes of the present declaration I make the con-

servative assumption that landline services are not in the relevant product market in which cellular and cellular-type services compete.

15. Among the relevant product markets in which cellular services may compete, the one that is now, and is likely to remain, most concentrated is *mobile telecommunications services*, which I define as the collection of services of the type that cellular and broadband personal communications services (PCS) offer or will offer within the next three to five years. As I will explain further below, at a minimum the participants in this market include cellular providers and broadband PCS providers with at least 20-30 MHz of spectrum. Participants are also likely to include broadband PCS licensees with 10 MHz of spectrum and enhanced specialized mobile radio (ESMR) providers with 5-10 MHz of spectrum. There may eventually be other participants as well, such as satellite-based services. Also, in some cases consumers are likely to be in a position to substitute landline telephone, paging, and two-way mobile radio services for cellular-type services.

16. The definition of the mobile telecommunications services market used in this declaration is based on the fact that cellular, PCS, and ESMR licensees are all authorized by the Commission to provide the full array of mobile services (Stanley M. Besen and William B. Burnett, "An Antitrust Analysis of the Market for Mobile Telecommunications Services," Charles River Associates, Dec. 1993, at 1 n.1, and at 17-18). It is also based on the conclusion that "all portions of the electromagnetic spectrum that have been allocated to the provision of mobile telecommunications services can be used to provide all of the same services and at about the same cost" (Besen and Burnett at 18).

17. My definition of a relevant antitrust product market for mobile telecommunications services is consistent with the analysis of Besen and Burnett, who define a single relevant antitrust market for all mobile services, including cellular, PCS, and ESMR. In their discussion of the market, Besen and Burnett include services such as paging that require only limited amounts of spectrum. However, in computing concentration in

the market, they include only cellular providers, broadband PCS providers (which will have at least 10 MHz of spectrum as a result of Commission licensing), and—in some of their calculations—ESMR providers with 5-10 MHz of spectrum.

18. Cellular systems may also compete in narrower relevant product markets, such as *wireless data transmission services* and *paging services*. However, any such narrower product market that may exist would have more participants and be less concentrated than the market defined for mobile telecommunications services. Because of the additional competitors and scope for entry in a narrower market, insofar as the regulations at issue in the present proceeding are concerned no additional competitive issues are likely to arise in such markets that do not arise in a market for mobile telecommunications services.

### 3. Relevant Geographic Markets

19. Mobile telecommunications service suppliers compete in providing services in connection with both local and long-distance calls. The precise geographic areas appropriate for analysis of both local and long-distance calls is complicated by the fact that the relevant licensees (cellular A, cellular B, broadband PCS A and B, broadband PCS C-F, and ESMR) serve or will serve different, overlapping areas.

20. In order to define geographic markets in any specific situation, one must determine the extent of feasible geographic price discrimination. To the extent that price discrimination is not feasible, and uniform prices must be charged over a wide geographic area, geographic markets will be broader than if price discrimination is feasible. The broader are geographic markets, the greater will be the number of participants in the markets, and the lower will be concentration. For example, if the geographic market is broader than the Basic Trading Areas (BTAs) used for some of the broadband PCS licenses, the number of broadband PCS competitors in the market will exceed the number of licenses (including Major Trading Area (MTA) licenses) valid in any single BTA. The market share and concentration measures computed below, as well as those pre-

sented by Besen and Burnett and others are likely to be biased upward because they are based on the implicit assumption that cellular licensees in different MSAs and PCS licensees in different BTAs are not in the same antitrust geographic markets (Besen and Burnett at n. 46 make the same point).

**C. Competitors for Cellular in Mobile Telecommunications**

**1. Broadband Personal Communications Services**

21. Digital personal communications services are being licensed in two portions of the radio spectrum. Broadband PCS will be in the 1850-1990 MHz range, while narrowband PCS will be in the 900 MHz range. There will be three 30 MHz broadband licenses and three 10 MHz broadband licenses.

22. There is general agreement that at least the 30 MHz broadband PCS licensees will compete with cellular providers. One observer has predicted that "broadband PCS systems will evolve primarily into cellular competitors. ... [E]conomic factors all suggest that the larger PCS systems, say 30 MHz MTA-wide systems, necessarily must target cellular subscribers ... to become their customers" (*Cellular Business*, March 1994, at 14, 16). According to Commissioner Andrew C. Barrett, "The three 30 MHz allocations, two at the MTA level and one at the BTA level, will provide significant opportunities for new entrants to compete against cellular providers and the emerging Enhanced Specialized Mobile Services market. This new framework achieves one of my policy goals of ensuring that at least three new PCS providers have a real opportunity to offer competitive alternatives to existing cellular players" (*TR*, June 13, 1994, at 5). A Commission staff report suggests that competitive PCS services can generally be offered with 20 MHz of spectrum (David P. Reed, *Putting It All Together: The Cost Structure of Personal Communications Services*, Federal Communications Commission, Office of Plans and Policy, 1992, at vii-ix). In addition, the Commission has stated that "narrowband PCS services may compete with cellular to some extent" (*CMRS Second Report* at ¶148).

23. Industry predictions suggest that PCS systems may have advantages over cellular systems, for example, additional service options, superior voice quality, smaller, lighter, cheaper handsets, and perhaps lower costs (*TR Wireless News*, June 30, 1994). Time Warner Telecommunications has been testing a technology that would make use of existing cable television plant to reduce the cost of deploying PCS services (*Multichannel News*, June 6, 1994, at 2). According to one industry analysis, "Putting all of these factors together, it does seem that PCS has at least a fighting chance to significantly underprice cellular services" (*TR Wireless News*, July 14, 1994).

24. One indication that those in a position to have the best information believe that PCS systems will be significant competitors is the substantial interest in, and the prices that companies are expected to bid for, PCS licenses.

25. Three pioneer preference 30 MHz MTA licenses have been awarded by the Commission. Remaining broadband PCS licenses presumably will be awarded next year. Thirty MHz broadband PCS licensees are required by the Commission to offer service to at least one-third of the population of their market areas within 5 years and two-thirds within 10 years. Ten MHz licensees will be required to cover 25 percent within 5 years or, alternatively, to submit a showing of "equivalent or substantial service" (*TR*, June 13, 1994, at 5).

## 2. Enhanced Specialized Mobile Radio Services

26. Specialized Mobile Radio (SMR) and ESMR service, like cellular service, uses spectrum in the 800-900 MHz range. The Commission has allocated 19 MHz to SMR/ESMR (*CMRS Second Report* at n. 296). In part because of restrictions imposed by the Commission, SMR has been used primarily for fleet radio-dispatch service. While most SMR systems currently use analog technology, according to a recent study 23 percent of the SMR industry is planning to implement digital technology in the next year. Digital technology will substantially increase capacity and permit firms to offer ESMR service, including integrated voice, messaging, pag-

ing, dispatch, and data services (*Land Mobile Radio News*, April 1, 1994; *Communications Week*, June 6, 1994, at 33).

27. Hausman concludes that "ESMR will provide a close substitute to cellular service" (Jerry A. Hausman, "Affidavit," *United States v. Western Electric Co., et al.*, D.D.C., 1992, at 16). Although ESMR may have certain handicaps compared to cellular (*CMRS Second Report* at ¶143), ESMR may offer a wider array of services. According to an industry analyst, many "customers were using SMR and cellular as two separate services, and now Nextel is offering them a package deal. Nextel also offers some advanced messaging capabilities that only a handful of cellular providers have begun to offer" (*Communications Week*, May 30, 1994, p. 31).

28. Nextel, Dial Page, and OneComm have been acquiring SMR systems nationwide and entering into agreements to provide regional, and eventually national, ESMR service (*Communications*, April 1994, at 76, 78). Nextel has agreed to merge with Dial Page and OneComm and to acquire all Motorola's SMR operations. Assuming these transactions close, Nextel's licenses will cover approximately 85 percent of the nation's population in bandwidth slices ranging from 10 to 15 MHz per market (*Multichannel News*, Sept. 5, 1994), and it will have more than 650,000 of the reported 1.5 million SMR subscribers nationwide (*TR*, Aug. 8, 1994, at 39-40; *Mobile Satellite News*, Mar. 2, 1994). Because of the large number of systems under common ownership and the common use of the Motorola Integrated Radio System (MIRS) digital technology, Nextel will have advantages in offering seamless national service (*Land Mobile Radio News*, April 1, 1994). Nextel also has equity shares in Canadian and Mexican SMR providers.

29. An important issue is how long it will take ESMR providers to make their services available as substitutes for cellular service. Motorola has introduced handsets for transmitting voice, data, and fax messages over ESMR. According to press reports, Nextel offers ESMR integrated voice, paging, and two-way radio services in a number of areas and expects to offer these services in several other areas by the end of 1994, when it ex-

pects to begin testing switched data services as well. It expects to begin testing packet switched services in 1995. OneComm plans to offer ESMR service in several areas in 1994, and Dial Page is aiming to offer service in the South and Midwest in 1995. It is also reported that the major "MIRS-based ESMR providers have banded together and said they will offer seamless nationwide service as they deploy their networks during the next 2-1/2 years" (*Communications Week*, June 6, 1994).

**D. Competitors for Cellular in Wireless Data Transmission**

30. Wireless data transmission service will be even less concentrated than cellular-type service because all the providers of cellular-type service will be in the market along with a number of other types of providers.

31. At the local level, cellular providers can offer data services using circuit-switched technology. For example, in Buffalo the non-wireline carrier offers circuit-switched cellular data service for purposes such as remote monitoring (*Communications Daily*, Aug. 3, 1994). Cellular providers are implementing a nationwide network using cellular digital packet data (CDPD) technology. A number of cellular companies have begun using CDPD, including McCaw in Las Vegas and Bell Atlantic Mobile in Baltimore-Washington and Pittsburgh (*Computer Reseller News*, May 23, 1994, at 152; *Financial Services Report*, May 25, 1994). Bell Atlantic has predicted that CDPD will be in the top 60 markets by the end of 1994 (*Advanced Wireless Communications*, May 11, 1994).

32. SMR providers currently can offer wireless data service at the local level. There are also two providers of national wireless data network services, both of which are non-cellular: Ardis, owned by Motorola, and RAM Mobile Data, owned by BellSouth and RAM Broadcasting, have packet switched radio networks in large cities nationwide. In addition, satellite-based services offered by companies such as Qualcomm are used heavily by the trucking industry for purposes such as dispatching, messaging, and tracking vehicle and package locations (*En Route Technology*, July 5, 1994).

33. Non-cellular competitors that are entering wireless data service include Metricom, which has a network operating in the Silicon Valley area and hopes that by the end of 1996 the top 30 U.S. metropolitan sites will be equipped and running; Nextel and other ESMR providers; and narrow-band PCS providers, such as Mobile Telecommunication Technologies' National Wireless Network, which is slated for roll-out in mid-1995 (*TELECOMREG Digest*, Aug. 8, 1994; *Computer Reseller News*, April 4, 1994, at 55; *Mobile Data Report*, Feb. 28, 1994). PageNet, which has three national paging frequencies, is also able to provide wireless data services (*Newsbytes News Network*, July 25, 1994).

#### **E. Performance**

34. The LPSC states that cellular carriers "may" be exercising market power (LPSC Petition at 28). In this section, I evaluate the limited evidence offered by the LPSC and find that none of that evidence, individually or collectively, demonstrates the exercise of market power. Claims about anticompetitive behavior are based on faulty economic analysis. By contrast, there is evidence of competitive behavior, and cellular customers have been benefiting from increasing service at declining real prices.

##### **1. Output and Capacity**

35. Cellular capacity, geographic coverage, and output have expanded rapidly throughout the past decade. The number of cellular subscribers increased from near zero in 1984 to 6.4 million in June 1991 and 19 million in the first half of 1994 (Hausman at 10; *Washington Post*, Sept. 6, 1994, at B4, citing the Cellular Telephone Industry Association). Besen *et al.* report that "Growth in cellular airtime also has been substantial, although it has been slower than the growth in number of subscribers because later subscribers have tended to use the service less intensively than earlier adopters" (Stanley M. Besen, Robert J. Lerner, and Jane Murdoch, "The Cellular Service Industry: Performance and Competition," Charles River Associates, 1992, at 1).



## 2. Pricing

36. The real prices of cellular service, adjusted for inflation, declined during each portion of the past decade for which I am aware of systematic studies. Besen *et al.* (at 2) report that on average in the ten largest cellular service areas real prices for access and 250 minutes per month of prime time use declined by 38 percent during 1983-1991. Another study reports that on average real prices for 150 minutes of air time per month declined by 27 percent or more during 1985-91 in the top 30 cellular markets (U.S. General Accounting Office, *Telecommunications: Concerns About Competition in the Cellular Telephone Service Industry*, 1992, at 22-24). Hausman (at 13) reports that real prices declined about 10-12 percent per year during 1987-92. At the same time, customers have benefited from expanding service areas.

37. In a study using data for 1989 and 1991, Hausman found that prices of cellular service were not lower in states that regulated those prices than in states that did not regulate them. He found that prices were 5 to 16 percent higher in states that required advance notice tariff filings for price changes (Hausman at 10).

38. The LPSC suggests that both *uniformity* in rates charged by the two cellular carriers in an area and *differences* in the rate structures of two cellular carriers are evidence of anticompetitive behavior (LPSC Petition at 28-29, 33). The LPSC seems ready to argue that any pattern of rates is evidence of anticompetitive conduct. In fact, all the evidence Louisiana presents concerning rates is consistent with competitive conduct.

39. The LPSC bases its economic argument on observation of prices in various areas of the state. In some areas, while the two competing cellular licensees offer a number of different rate plans, the rates are similar for similar plans. The LPSC presents this similarity as evidence of lack of competition, or "consciously parallel pricing." However, prices of similar services will tend to be similar in a competitive market. If prices are different, consumers will tend not to buy from the supplier with the higher